May 2019

Recession Ahead?

While Concerns Mount, Projections Show Moderate Growth In NYC Tax Revenue for the Upcoming Years

June 2019 marks the 10-year anniversary of the end of the Great Recession. Over the last 118 months the country has experienced a slow but steady recovery, a recovery that will soon stand as the longest economic expansionary period in U.S. history. New York City has seen record growth in economic activity during this period and as a result the city's own finances have thrived. The city's tax collections have increased by nearly 65 percent since the end of 2009, an average annual growth rate of 5.7 percent. Collections of property and personal income tax have grown annually by an average of 6.9 percent and 6.6 percent, respectively.

While certain economic indicators have recently signaled uncertainty ahead, for the most part the city's economy continues to flourish. Still, policy decisions taken at the national and international level continue to pose potential threats to the city's fiscal condition while pressure from Albany places millions of dollars of city funding at jeopardy. Yet, even with these risks acknowledged and at least partially accounted for, the city's revenue forecast and expenditure plan continues to grow at a moderate pace while out-year budget gaps remain manageable.

The Executive Budget for 2019 and Financial Plan Through 2023 is not unlike other recent financial plans issued by the de Blasio Administration. As with the plan issued at this time last year, the Executive Budget for 2020 does not include much in the way of new large-scale programs or big-

Total Revenue and Expenditure Projections
Dollars in millions

		Plan					
	Actuals 2018	**2019**	**2020**	**2021**	**2022**	**2023**	**Average Change 2018 -2023**
Total Revenue	**$88,573**	**$93,377**	**$93,617**	**$95,606**	**$98,701**	**$101,427**	**2.7%**
Total Taxes	58,915	61,210	63,690	65,801	68,341	70,599	3.7%
Total Expenditures	**88,568**	**93,001**	**92,942**	**98,359**	**100,428**	**102,947**	**3.1%**
IBO Revenue Less Expenditures	**n/a**	**$375**	**$675**	**($2,754)**	**($1,727)**	**($1,521)**	
IBO Prepayment Adjustment 2019/2020	n/a	(375)	(675)	1,050	-	-	
IBO Surplus/(Gap) Projections		**-**	**-**	**($1,703)**	**($1,727)**	**($1,521)**	
Adjusted for Prepayments and Non-Recurring Expenses							
Total Expenditures	$88,171	$94,411	$95,209	$97,043	$99,005	$101,397	2.8%
City-Funded Expenditures	$64,410	$68,569	$70,614	$72,529	$73,909	$75,827	3.3%

NOTES: IBO projects an additional surplus of $375 million in 2019 and $675 million in 2020. The surplus could be used to prepay some 2021 expenditures reducing the 2021 gap to $1.65 billion, leaving 2019 and 2020 with balanced budgets. Figures may not add due to rounding.

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ticket initiatives. Compared with his Preliminary Budget, the Mayor's latest plan includes approximately $600 million in additional city revenue in the current year, two-thirds of which is attributable to sources other than taxes. Approximately $230 million of the additional revenue in 2019 is the result of the citywide savings program (Program to Eliminate the Gap, or PEG) initiated by the de Blasio Administration. The bulk of these resources were used to fund shortfalls in agency expenditures to make up for cuts in education aid, shifts in funding responsibility, and unfunded mandates resulting from state actions.

Under the Executive Budget and financial plan proposed by the Mayor, IBO projects that the city will end the current fiscal year with $514 million more in revenue than the de Blasio Administration estimates. This additional revenue, coupled with IBO's estimate that current year expenditures will be $139 million greater than the Mayor's Office of Management and Budget (OMB) expects, adds $375 million to the surplus for 2019, which would total $3.9 billion. In 2020, as a result of $775 million in additional revenues offset by $100 million in unaccounted expenses, IBO estimates the city will end the year with a surplus of $675 million. The 2019 and 2020 surpluses, if used to reduce expenses in 2021, would lower that year's budget gap to $1.7 billion (2.4 percent of city-generated revenue). IBO estimates the city will face budget gaps of $1.7 billion (2.3 percent) in 2022 and $1.5 billion (2.0 percent) in 2023. Each of these annual budget gaps would nearly be eliminated by drawing down reserves that have already been included in the financial plans for those years.

Other key findings from our review of the Mayor's Executive Budget and financial plan:

- IBO's current forecast for total 2019 tax revenues has increased since our March outlook by $79 million, or 0.1 percent. We project that the 2019 tax collections will exceed the previous year's collections by 4.5 percent. IBO expects growth in city tax revenues to continue at a similar pace through the remainder of the financial plan period with total tax collections reaching $70.6 billion by 2023.
- IBO's property tax forecast exceeds the Mayor's projections by $111 million in 2019, with the difference rising to $1.2 billion in 2023. IBO's estimates for the personal income tax (PIT) and the general corporation tax are also consistently higher each year than the Mayor's from 2019 through 2023.
- Adjusting for prepayments of current-year expenses with prior-year revenues and for other non-recurring and unallocated expenses, IBO estimates that city-funded expenditures will increase by an average of 3.3 percent annually from 2018 through 2023, compared with average growth in revenue of 3.7 percent.
- Debt service and fringe benefit costs are the two largest drivers of overall expenditure growth, growing by an average of 8.3 percent and 5.9 percent annually from 2019 through 2023.

U.S. and Local Economic Outlook

The U.S. economic expansion that began in 2010 will shortly become the nation's longest. IBO expects consumer spending to continue fueling the expansion, although economic growth is forecast to slow from 2018's pace. The fiscal stimulus of federal tax cuts and spending increases that boosted growth last year has begun to fade, and IBO forecasts 2.7 percent real gross domestic product (GDP) growth in 2019, down from 2.9 percent in 2018. (In our discussion of the economic outlook, years refer to calendar years and monthly and quarterly data are seasonally adjusted.) An increasingly tight labor market is expected to further reduce the unemployment rate but also to constrain growth and increase inflationary pressures. Although IBO is not forecasting a recession, we are expecting slower economic growth throughout the remainder of the financial plan period, particularly in calendar year 2020, when we project GDP will increase just 1.6 percent. Our forecast is premised on there being no external shocks to the economy, such as a major disruption of trade, no further changes to fiscal policy, and on the Federal Reserve's suspending interest rate increases and quantitative easing for the remainder of the year.

Employment in the New York City economy increased by 92,900 in 2018, but two-thirds of the gains came from just a few sectors: home health care, individual and family services, and employment services, plus an adjustment in reported government sector workers. Employment growth in other sectors decelerated, from 57,300 jobs in 2017 to 29,900 in 2018. IBO forecasts 72,500 new jobs in 2019, with slowdowns in the sectors that swelled last year's employment growth. The projected sluggishness in U.S. economic growth in 2020 and 2021 will lead to further slowing of city employment increases, which is projected to average 36,000 in those two years. Slower employment growth will also raise the unemployment rate, from 4.3 percent in 2020 to 4.9 percent in 2022.

U.S. Economy. Next month the current economic expansion will turn 10-years old and become the longest in the

IBO versus Mayor's Office of Management and Budget Economic Forecasts						
	2018	**2019**	**2020**	**2021**	**2022**	**2023**
National Economy						
Real GDP Growth						
IBO	2.9	2.7	1.6	2.2	2.6	2.1
OMB	2.9	2.4	2.1	1.8	1.7	1.6
Inflation Rate						
IBO	2.4	1.8	2.2	2.2	2.3	2.3
OMB	2.4	2.0	2.1	2.3	2.4	2.4
Personal Income Growth						
IBO	4.5	4.5	4.5	3.7	4.3	4.1
OMB	4.5	4.3	4.4	4.4	4.3	4.2
Unemployment Rate						
IBO	3.9	3.7	3.6	4.3	4.6	4.7
OMB	3.9	3.6	3.6	3.8	4.0	4.2
10-Year Treasury Note Rate						
IBO	2.9	2.7	3.2	3.5	4.2	4.3
OMB	2.9	2.8	3.1	3.2	3.3	3.3
Federal Funds Rate						
IBO	1.8	2.4	2.7	2.9	3.2	3.2
OMB	1.8	2.5	2.8	2.9	2.9	2.8
New York City Economy						
Nonfarm New Jobs (thousands)						
IBO (Q4 to Q4)	92.9	72.5	34.2	37.7	43.9	42.6
IBO (annual average)	86.7	87.9	50.7	29.9	44.2	42.5
OMB (annual average)	86.7	68.9	66.1	53.3	51.3	47.1
Nonfarm Employment Growth						
IBO (Q4 to Q4)	2.1	1.6	0.7	0.8	0.9	0.9
IBO (annual average)	1.9	1.9	1.1	0.6	0.9	0.9
OMB (annual average)	1.9	1.5	1.4	1.1	1.1	1.0
Inflation Rate (CPI-U-NY)						
IBO	1.9	1.6	2.3	2.5	2.6	2.5
OMB	1.9	1.8	2.2	2.3	2.4	2.4
Personal Income ($ billions)						
IBO	648.7	665.6	685.1	708.2	740.8	773.6
OMB	639.1	662.1	684.7	707.1	729.7	751.7
Personal Income Growth						
IBO	6.2	2.6	2.9	3.4	4.6	4.4
OMB	4.6	3.6	3.4	3.3	3.2	3.0
Manhattan Office Rents ($/sq.ft)						
IBO	79.2	82.6	85.6	87.4	90.1	92.9
OMB	78.8	83.7	86.3	89.4	93.3	95.6

SOURCE: Mayor's Office of Management and Budget
NOTES: Rates reflect year-over-year percentage changes except for unemployment, 10-Year Treasury Note Rate, Federal Funds Rate, and Manhattan Office Rents. The local price index for urban consumers (CPI-U-NY) covers the New York/Northern New Jersey region. Personal income is nominal.

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post-World War II era. The strong labor market, which has kept the unemployment rate at 4.0 percent or less since March 2018, continues to fuel consumer demand and the economy's production of goods and services. Stimulated by expansionary federal fiscal policies—tax cuts enacted in December 2017 with the Tax Cuts and Jobs Act (TCJA) and $300 billion of spending increases that lawmakers agreed to in March 2018—real (inflation-adjusted) GDP grew 2.9 percent in 2018, up from 2.2 percent growth in 2017. As the fiscal stimulus fades and tight labor markets add to mounting inflationary pressures, the U.S. economy is forecast to slow late in 2019 and—especially—2020, before picking up modestly in 2021 and 2022.

Consumer demand has been the primary driver of the current economic expansion, fueled by strong growth in employment, low debt burdens, and rising asset prices. The long expansion has attracted more individuals to enter the labor force, fueling additions to consumer demand and enabling businesses to expand output to meet that demand. Monetary policy has kept interest rates low, leaving the household sector's debt service burdens, the share of after-tax income required to stay current on debt obligations, at historic lows. Rising housing prices and record highs on Wall Street have swelled the wealth of many households, increasing their willingness to spend.

For much of the current economic expansion the Federal Reserve pursued a very accommodative monetary policy in order to stimulate economic growth, maintaining a very low federal funds rate (the interest rate at which banks lend reserve balances overnight) and purchasing securities on the open market in order to put downward pressure on longer term rates (quantitative easing). Beginning in 2016, however, the Fed gradually moved towards a less accommodative policy stance, increasing interest rates in small increments and gradually unwinding quantitative easing by selling securities.

Throughout 2018 and into 2019 the unemployment rate has been well below what most economists consider to be full employment, the threshold (currently somewhere in the vicinity of 4.5 percent) under which labor markets are thought to be tight enough to spur inflation. Though inflationary pressures have been building and real wages have begun to rise, tighter monetary policy over the course of 2018 has contributed to a decline in the rate of inflation from 2.9 percent in the middle of 2018 to 1.9 percent in March—just below the Federal Reserve's target of 2.0 percent.

From late September to the end of 2018, companies listed on the New York Stock Exchange lost almost a fifth of their value (as measured by the exchange's composite index), which shook investor confidence and led to concerns that economic growth was too weak to withstand further rate hikes. In response, in January the Fed's policymaking committee voted unanimously to suspend plans for further increases in the federal funds rate during 2019 and defer further unwinding of its quantitative easing portfolio. It reiterated its responsibility to continually evaluate economic conditions and to adjust monetary policy as needed in order to sustain growth, even if it means tolerating above-target inflation for a period of time. The change in Fed policy reassured investors and helped reverse Wall Street's decline.

IBO projects that the Fed's suspension of further tightening combined with the remaining federal fiscal stimulus, mostly deficit-financed spending, will result in continued above-potential growth through much of 2019. The preliminary estimate of first quarter real GDP growth was an unusually strong 3.2 percent, well above even the most optimistic forecasts. We expect that growth will slow throughout the remainder of 2019, however, with real GDP increasing 2.7 percent for the year, slightly below last year's 2.9 percent. This growth will push the unemployment rate from 3.9 percent in 2018 to 3.7 percent in 2019, even further below the full-employment rate. Despite continued above-potential growth putting upward pressure on wages and prices, IBO expects inflation to average 1.8 percent for the year and generally remain below the Fed's target level.

Economic growth is expected to slow further through the third quarter of 2020, and IBO forecasts 1.6 percent real GDP growth for the year as a whole. The already low unemployment rate is projected to decline even further into the first half of 2020, accompanied by increases in real wages and greater but still moderate inflation. To prevent the economy from overheating. the Federal Reserve will cautiously resume increases in interest rates, limiting inflation to an average of 2.2 percent in 2020. Real GDP growth will bottom out in the second half of 2020 and the unemployment rate will begin to rise. IBO projects a gradual acceleration of economic growth in 2021 continuing into 2022, with real GDP expected to grow by 2.2 percent and 2.6 percent, respectively.

The forecast is premised on the Federal Reserve maintaining, as announced, a neutral monetary policy at least through the end of 2019, and being able to successfully respond to macroeconomic conditions as needed thereafter. Should demand remain strong and inflation quicken, we expect the Fed will be able to raise interest rates and unwind quantitative easing just enough to slow economic growth and tame inflation, but not so much as to substantially reduce business investment and consumer spending, or to rapidly deflate asset prices. But should the economic growth falter on its own accord without inflation, we expect the Fed to revert to lowering rates and quantitative easing as needed.

IBO's forecast does not assume any near-term change to federal fiscal policy to reduce the ballooning budget deficit. Conversely, we do not anticipate any additional fiscal stimulus in the next two years. The recent midterm elections resulted in a Congress divided along party lines, making it unlikely that both sides of the aisle will agree to additional deficit-financed tax cuts through the end of the forecast period.

Finally, IBO's forecast is based on the assumption that there will be no external shocks to the U.S. economy, such as a major downturn in the global economy or a sudden spike in oil prices. But the geopolitical climate poses a major risk—an escalation of trade wars between the U.S. and other countries. The recent trade agreement between Canada, Mexico, and the U.S., if ratified, would lessen this risk, though it is not clear if the U.S. will be able to reach an agreement on trade with China, our largest trading partner. The risk of major disruption of global trade and finance due to missteps in the United Kingdom's exit from the European Union has been deferred until October 31, 2019, although the path to an undisruptive Brexit remains unclear. Many other major economies, including Germany, Japan, and Canada, are experiencing slower growth, and should one or more of them enter into recession, a major downturn in the global economy would threaten U.S. economic growth.

IBO's economic forecast of slower growth in 2019 and 2020 is shared by the Mayor's Office of Management and Budget in its latest financial plan, though the growth rate forecasts differ in each year. IBO forecasts faster real GDP growth than does OMB in 2019 (2.8 percent vs. 2.4 percent) but slower growth in 2020 (1.6 percent vs. 2.1 percent). The trajectories of the two forecasts diverge after 2020, however: while IBO forecasts economic growth to firm up in 2021 and 2022 followed by another dip in 2023, OMB expects growth to continue to drift lower through the end of the forecast period.

New York City Economy. Job growth decelerated across much of the city economy in 2018, though the extent of the slowdown was masked by exceptional gains in a few sectors. IBO expects slower growth to persist in 2019, as the sectors that were turbocharged last year provide less of a boost. A projected slackening in the national economy from the middle of 2020 through early 2021 is expected to further drag down employment growth in the city, while also pushing up the unemployment rate.

Employment. New York City gained 92,900 jobs in 2018, but two-thirds of this growth was due to unusual trends in three sectors—home health care services, individual and family services, and employment services—along with an adjustment in the local government headcount.[1] Home care and individual and family services added a combined 39,700 jobs last year, employment services added 15,400, and government 7,900.

The increase in local government employment resulted from a change in the source for employment data. Before 2018, the Bureau of Labor Statistics (BLS) based its tabulation of New York City government employment on data from the state unemployment insurance system. In 2018, BLS began using data from the city's own automated payroll system, resulting in a significantly higher city government headcount. This adjustment was retroactively phased in a way that made it look like government payrolls jumped in 2018. But the apparent gain was a statistical artifact: those "new" employees were already there on the city's payroll—just not counted by BLS.

Much of the recent strong growth in home health and individual and family services has been driven by rapid expansion of the Consumer Directed Personal Assistance Program (CDPAP). This program enables eligible seniors and the disabled to choose their own home-care providers, including family members, who are "co-employed" by entities called fiscal intermediaries that are reimbursed by Medicaid. Within employment services, the recent jump in growth all comes from professional employer organizations (PEOs), which also provide co-employment services—though in this case the clients are other businesses.[2]

Outside of these sectors, employment growth slipped from 57,300 (1.7 percent) in 2017 to just 29,900 (0.9 percent) in 2018, and the slippage was evident across almost all of the city economy.

Apart from home health and individual and family services, employment in health care and social assistance grew by 4,800 (1.1 percent) in 2018, an improvement over the previous year (3,500 jobs added) but well below the average gains of 7,100 per year from 2013 through 2016.

The slowdown was even more pronounced in professional, scientific, and technical services. This high wage industry grew by an average of 16,200 jobs per year from 2011 through 2015 (and enjoyed equally strong or stronger growth streaks in the 1997-2000 and 2005-2007 expansions), but slipped to 9,800 in 2016 and eked out gains of only 5,200 in 2017 and 4,900 in 2018.

Information, construction, and transportation and warehousing all weakened last year, registering their lowest job gains since 2009, 2011, and 2013, respectively. Following three years of declining employment, retail trade managed a gain of 3,200 jobs in 2018, all in the fourth quarter, but this was far from the double-digit average growth rate from 2010 through 2014. Wholesale trade lost 3,700 jobs in 2018, the third straight year of declines. Manufacturing employment continued to shrink, a trend that stretches back almost unabated for over a half a century.

The most precipitous drop-off was in accommodation and food services, which averaged employment growth of 15,900 per year from 2010 through 2017 but lost 4,400 jobs in 2018. Hardest hit were full service restaurants, which lost 5,900 jobs last year. The employment declines were concentrated in Manhattan, with the other boroughs sustaining diminished growth. All five boroughs have seen a drop in the number of full-service eating establishments over the past year. This sector continued to gain jobs at the national level, suggesting local factors at work in the retrenchment we are seeing here.

Bucking this trend colleges and universities added 6,000 jobs in 2018, a big bounce following three years of meager increases. Another relative bright spot was the securities industry, which rang up a gain of 4,400 jobs, its best mark in four years. Banking and insurance lost jobs, however, and real estate employment slumped in the second half of the year.

IBO projects employment growth of 72,500 in 2019. The forecast includes upticks in construction, trade, transportation and warehousing, banking, insurance, professional services, and personal services. But government employment will be essentially flat (no longer lifted by the reporting changes that inflated growth in 2018). The sectors that lifted overall growth with extraordinary surges in employment in 2017 and 2018—home care, individual and family services, and employment services—are harder to predict, but IBO anticipates some abatement of this extraordinary growth in 2019 and the years to come. With less lift from these sectors and almost none from government, overall employment growth slows.

Much of the lift was still there in the first quarter of 2019, with home care and individual and family services adding a combined 8,700 jobs, or two-fifths of the overall city employment gain (21,800) for the quarter. However, IBO expects growth in these sectors to taper somewhat over the rest of the year, partly in anticipation of changes in the regulation of the Consumer Directed Personal Assistance Program slated to go into effect in 2020. How far this program's rapid expansion will be sustained as the state moves to overhaul and consolidate the process of hiring (or co-employing) CDPAP providers is one of the major uncertainties looming over the employment forecast for the city.

We also expect employment services growth to subside somewhat, though this again is difficult to forecast because we do not have a good handle on why professional employer organization employment has been soaring in New York City while it is sagging nationwide—or how long the city can defy the national trend.

Another looming uncertainty concerns full service restaurants. These establishments shed another 1,100 jobs in the first quarter of 2019; this makes five consecutive quarters of losses, with 7,000 jobs lost since the end of 2017. One has to go back to the early 1990s to find a comparable stretch of losses in this industry—but that was when the entire city economy was in the grip of severe recession, and then restaurant employment began to grow again as the rest of the economy started to recover. But the current decline in city restaurant employment is both unrelated to national industry trends and far exceeds anything that could be explained by slackening in the broader city economy. This leaves us with few clues as to how much longer full-service restaurant employment will continue to contract locally before it stabilizes.

IBO projects that total city employment will increase by just 34,200 in 2020 and 37,700 in 2021, roughly half the number of jobs we expect in the current year. Job growth over the remainder of the financial plan period is scarcely better, averaging 43,200 per year.

Change in Full-Service Restaurant Employment: NYC v. U.S.
Seasonally adjusted

	New York City	Rest of U.S.
2017:Q1	2,901	16,932
2017:Q2	1,462	24,471
2017:Q3	1,076	9,091
2017:Q4	225	18,475
2018:Q1	(1,038)	16,805
2018:Q2	(821)	26,788
2018:Q3	(3,343)	39,143
2018:Q4	(729)	42,062
2019:Q1	(1,051)	40,301
Last five quarters	(6,982)	165,099
	-4.03%	3.11%

SOURCE: Bureau of Labor Statistics
New York City Independent Budget Office

The sharp drop in city job growth parallels a dip in the U.S. economy during which projected nationwide employment actually declines from the third quarter of 2020 through the first quarter of 2021. This weakness in the U.S. economy will drag down employment growth in the city as well. Added to this we expect the pace of hiring in home care and individual and family services to further subside in 2020 and beyond as the consolidation of the Consumer Directed Personal Assistance Program takes hold—though even then home care and individual and family services will account for a third or more of overall job gains in the city.

Labor Force. After hovering around 4 percent throughout the second half of 2018—the lowest rate on record—the unemployment rate in New York City rose to 4.3 percent as of March 2019. Seasonally adjusted resident employment in the city fell by 16,000 over the first three months of the year, while the number of unemployed increased by 10,600. It is not clear though whether this signals an actual contraction or is mostly statistical noise; the city's labor force data have been at times highly volatile and have undergone large revisions in recent years.[3]

Following the most recent revision, the data also indicate that the city's total adult civilian population has been falling since August 2016. IBO expects the city's adult population to remain roughly flat over the plan period, which will constrain resident labor force growth. A tight labor market should continue to keep the city's unemployment rate relatively low through the middle of 2020, after which the slowdown discussed above is projected to push the rate up to 4.6 percent by the end of 2020 and to nearly 5 percent in late 2021 and through 2022.

Wages. Wage growth has been weak in New York City over the course of the expansion and after adjusting for inflation, wages in 2018 remained below where they stood pre-crisis in 2007. There were strong wage gains in sectors like information and educational services, but notably large real wage declines in securities and in ambulatory health care. Securities wages fell sharply during the crisis in 2008 and 2009, and have only intermittently grown in the decade since. In ambulatory care the wage declines have been ongoing over the past decade, and reflect the fact that low-wage home health jobs have been making up a larger and larger share of total ambulatory care employment.

IBO projects weak but positive real wage growth over the next five years, with the exception of 2021 when wages will be flat.

Wall Street. New York Stock Exchange member firms have posted strong broker-dealer profits over the last two years—$24.5 billion in 2017 and $27.3 billion in 2018. IBO projects profits to decline to $22.8 billion this year, as growth in net interest expenses slightly outpaces growth in net operating revenue. Both interest expenses and operating revenue will remain far below their pre-crisis peaks, however; adjusted for inflation, net operating revenue in 2019 will only be a third and net interest costs only a fourth of what they were in 2007.

IBO expects the slowdown in the U.S. economy in 2020 and 2021 to keep broker-dealer profits below $20 billion each year. Profits will rebound in 2022 but not to the levels reached over the last two years.

Real Estate. Taxable real estate sales in New York City were $25.7 billion during the first quarter of 2019. Compared with the first quarter of 2018, commercial sales were 12.8 percent higher and residential sales 7.1 percent lower.

Commercial sales were very strong in January 2019. The total value of these sales was $8.6 billion, only the third time since the beginning of 2016 that monthly commercial sales have exceeded $8 billion. A total of 21 commercial transactions valued over $100 million were recorded, the most high-value transactions since December 2013.

Commercial sales then dropped sharply in February and March. IBO had anticipated some decline, but we have further reduced our forecast of 2019 sales to $58.4 billion, a drop of 6.4 percent compared with our March projections and a year-over-year decline of 3.5 percent from 2018.

Residential real estate had a solid start to the year, with January 2019 sales of $4.1 billion, including a record-setting Manhattan apartment closing of $240 million. Although residential sales were lower in February and March—$3.4 billion and $3.7 billion, respectively—sales in these months are typically slow. Compared with our March outlook, IBO has raised its forecast of residential sales for the year as a whole by 5.3 percent, to $51.5 billion. This forecast represents a 0.6 percent increase over residential sales in 2018.

IBO projects modest increases in the value of both commercial and residential real estate sales in 2020 through 2023. By 2023 total sales are forecast to reach $121.5 billion, an increase of 10.6 percent over 2019, but below the peak of $126.3 billion reached in 2015.

Taxes and Other Revenues

IBO's near term outlook for fiscal year 2019 revenues has been revised upward from what we projected in our previous forecast two months ago. (For the balance of this report, years refer to city fiscal years unless otherwise noted.) The increase is driven by an upward revision in our personal income tax outlook for this year ($423 million), tempered by downward revisions in most of the city's other taxes, resulting in a $178 million (0.4 percent) increase in IBO's projections for 2019 tax revenue. The jump in the outlook for personal income tax collections comes after a precipitous drop in estimated payments earlier in the year that has since been erased by a surge in extension payments in April. Tax revenue in 2019 is now expected to total $61.2 billion, an increase of 3.9 percent from 2018. We forecast a slight pickup in tax revenue growth in 2020 to 4.1 percent, with revenues of $63.7 billion. After 2020 growth is expected to average 3.5 percent annually, with total tax revenue reaching $70.6 billion in 2023.

The city's tax collections have seesawed in recent years, with much of the ups and downs attributable to the federal Tax Cut and Jobs Act. It spurred many city income taxpayers to accelerate their payments before limits on state and local tax deductions hit, which boosted 2018 collections at the expense of 2019 revenue. The TCJA combined with other federal fiscal stimulus has juiced the economy, at least temporarily, accounting for some of the strong growth of the business corporation tax and the sales tax. But with the stimulus expected to fade in calendar years 2019 and 2020, economic growth is expected to slow, leading to somewhat weaker tax revenue growth in fiscal years 2021 through 2023.

IBO projects that tax revenue growth will average 3.7 percent annually from 2018 through 2023, which would be the slowest five-year annual average since the end of the Great Recession. Since the recession, the five-year average has ranged from a low of 5.2 percent (2014-2019) to a high of 7.1 percent (2010-2014). The real property tax and the sales tax are expected to show the steadiest and strongest growth, averaging 5.5 percent and 4.0 percent annually in 2019 through 2023. No other tax is projected to average more than 3.1 percent annually, with several—including the personal income tax and the mortgage recording tax (MRT)—expected to average less than 2.0 percent annual growth over the five years.

OMB and IBO have both increased their total tax revenue forecasts from earlier in the year, with OMB's changes larger than IBO's in 2019 and 2021 through 2023; IBO's changes are slightly larger in 2020. As a result, the gaps between the two sets of estimates have narrowed somewhat since our previous forecasts. Still, IBO's forecast of tax revenues exceeds OMB's in each year of the plan, with the gap growing from $508 million (0.8 percent) in 2019 to $747 million (1.2 percent) in 2020, and $1.7 billion (2.4 percent) in 2023. Throughout the forecast period, much of the difference is attributable to IBO's more robust outlook for the real property tax, the personal incom tax, and the corporate income taxes; the property tax difference is particularly wide in 2023 when it exceeds $1.1 billion (3.5 percent).

Total revenue, including not only taxes, but also revenue from the city's fees, fines, and other miscellaneous sources; state and federal grants and other categorical aid; and interfund revenues are now forecast to total $93.4 billion for the current year, $879 million more than we estimated in March. In addition to the $253 million increase in tax revenue, the city has recognized some additional state aid that has now been received as well as $430 million of additional miscellaneous revenue; about $230 million of this new nontax revenue is a product of the Citywide Savings Plan/PEG initiative. Changes for subsequent years were more modest, with revenue from all sources now expected to total $93.6 billion in 2020, growing to $101.4 billion by 2023.

Real Property Tax. IBO's updated property tax forecast is little changed from our March outlook. Virtually all of the difference between our prior forecast and our current forecast is due to small changes in the projections for property tax reserve items rather than from changes in assessed value or the levy. The property tax reserve includes provision for the costs of abatements, delinquencies, refunds, and cancellations, as well as revenue from prior-year liabilities and lien sales.

IBO now projects that property tax revenue for 2019 will total $27.9 billion, a net decrease of $19.7 million (0.1 percent) since our March estimate, due primarily to lower than anticipated overpayments (-$70.0 million), offset by lower than expected refunds ($50.3 million). Our revenue forecast for 2020 is $30.0 billion, an increase of 7.4 percent from the current year. After 2020, revenue is projected to grow at an average annual rate of 4.6 percent through 2023, when collections are expected to reach $34.3 billion. The outlook for higher revenue results primarily from expected growth in the levy for Tax Class 4 (commercial) properties, which we expect to increase by

IBO Revenue Projections *Dollars in millions*							
		Plan					**Average Change**
	Actuals 2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2018-2023**
Tax Revenue							
Property	$26,219	$27,906	$29,965	$31,359	$32,850	$34,273	5.5%
Personal Income	13,380	13,153	13,215	13,708	14,122	14,506	1.6%
General Sales	7,443	7,829	8,260	8,489	8,775	9,050	4.0%
Business Corporation	3,437	3,907	3,846	3,904	4,047	4,009	3.1%
Unincorporated Business	2,182	2,014	2,147	2,281	2,397	2,483	2.6%
Real Property Transfer	1,388	1,504	1,511	1,534	1,571	1,612	3.0%
Mortgage Recording	1,049	1,089	1,025	1,038	1,049	1,110	1.1%
Utility	371	391	410	413	422	426	2.8%
Hotel Occupancy	597	629	637	644	654	665	2.2%
Commercial Rent	853	880	873	908	932	944	2.0%
Cigarette	36	36	34	33	32	31	-2.9%
Other Taxes and Audits	1,960	1,872	1,767	1,490	1,490	1,490	-5.3%
Total Taxes	**58,915**	**$61,210**	**$63,690**	**$65,801**	**$68,341**	**$70,599**	**3.7%**
Other Revenue							
STaR Reimbursement	189	$181	$182	$180	$178	$176	-1.4%
Miscellaneous Revenue	7,196	8,071	6,983	6,942	6,916	6,910	-0.8%
Unrestricted Intergovernmental Aid	-	201	-	-	-	-	n/a
Disallowances	139	91	(15)	(15)	(15)	(15)	n/a
Total Other Revenue	**$7,524**	**$8,544**	**$7,150**	**$7,107**	**$7,079**	**$7,071**	**-1.2%**
Less: Intracity Revenue	**($2,172)**	**($2,220)**	**($1,819)**	**($1,817)**	**($1,815)**	**($1,814)**	
TOTAL CITY-FUNDED REVENUE	**$64,267**	**$67,534**	**$69,021**	**$71,091**	**$73,605**	**$75,856**	**3.4%**
State Categorical Grants	$14,453	$15,441	$15,354	$15,743	$16,210	$16,717	3.0%
Federal Categorical Grants	7,966	8,530	7,544	7,196	7,317	7,285	-1.8%
Other Categorical Aid	1,255	1,214	962	904	898	897	-6.5%
Interfund Revenue	637	657	735	672	672	672	1.1%
TOTAL REVENUE	**$88,573**	**$93,377**	**$93,617**	**$95,606**	**$98,701**	**$101,427**	**2.7%**

NOTES: Remaining banking and general corporation tax revenues reported with business corporation tax. Figures may not add due to rounding.

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5.1 percent on average from 2020 through 2023.

IBO's property tax forecast exceeds OMB's, by increasing amounts in each successive year—from $111.4 million (0.4 percent) in 2019 to $1.1 billion (3.5 percent) in 2023. In 2019 and 2020, almost the entire difference between IBO's and OMB's forecasts is due to differences in projections for the property tax reserve. Compared with IBO, in all years OMB is carrying much larger reserve allowances for refunds, delinquencies, and cancellations—all of which are considered debits that reduce property tax revenue. For 2021 through 2023, IBO's forecast of somewhat higher billable assessed value and levy is a more significant factor in the difference between IBO's and OMB's forecasts. IBO is forecasting the billable assessed value of Class 4 properties—which account for 47.8 percent of the total assessed value subject to tax—to grow at an annual average of 5.0 percent from 2021 through 2023, while OMB is forecasting annual growth of 3.9 percent for these properties.

Real Estate-Related Taxes. The city receives revenue from two taxes related to real estate purchases or financing, and from a tax on commercial leases. The real property transfer tax (RPTT) is levied on the value of real estate sold, while the mortgage recording tax is levied on the value of mortgages, including certain refinancing activity. Together these taxes are referred to as the transfer taxes. A third real estate-related tax, the commercial rent tax (CRT), is levied on the value of certain commercial property leases in parts of Manhattan.

IBO has made some adjustments since March in its forecasts of the transfer taxes, but the overall trends for the years 2019-2023 remain unchanged. After strong collections in January, transfer tax receipts fell more sharply than anticipated in February and March. The decline was due primarily to a greater-than-expected fall in commercial real estate sales, as well as a drop in mortgage activity. Although January's strong collections were reflected in our March forecast, the weaker collections in February and March were not. As a result, IBO has revised its 2019 transfer tax forecast downward by $94 million (3.5 percent). Transfer tax totals for 2020 through 2023 have been revised upward, but by very small amounts—1.2 percent in 2021 and under 1.0 percent in the other years.

Small upward adjustments have been made to IBO's forecast of CRT revenue each year from 2019 through 2023. Over the entire forecast period, total projected revenue has increased $56 million (1.2 percent) compared with March. The basic year-to-year pattern remains the same as forecast in March: a very small drop in revenue in 2020 (less than 1.0 percent), followed by moderate growth in the following three years.

Real Property Transfer Tax. RPTT collections for 2019 are projected to be just over $1.5 billion, a decrease of $31 million (2.0 percent) from IBO's March forecast, but still 8.3 percent above 2018. The 2019 forecast has been revised downward in light of the sharp drop in commercial sales in February and March. IBO's current forecasts for 2020 through 2022 are 1.0 percent to 2.0 percent above our March forecast, while the forecast for 2023 is essentially unchanged.

RPTT revenue closely follows the value of real estate sales, with higher rates applied to commercial than to residential properties, and higher rates applied to sales over $500,000 for all properties. Currently, virtually all of the commercial sales value, and about 90 percent of residential sales value, are taxed at the above $500,000 rate.

RPTT revenue reached almost $1.8 billion in both 2015 and 2016, coinciding with a surge in commercial real estate sales. Commercial sales declined sharply in 2017 and 2018, and while residential sales increased somewhat, the overall trend in the real estate market was lower sales prices and lower RPTT revenue. In the first seven months of 2019 commercial sales surged, while residential sales remained steady. As expected, both commercial and residential sales have declined in subsequent months. However, the decline in commercial sales has been greater than anticipated, and as a result IBO has reduced its RPTT forecast for 2019 with respect to the March report by $31 million (2.0 percent). However, at just over $1.5 billion, 2019 RPTT revenue is still projected to be $116 million (8.3 percent) above its level in 2018. IBO projects modest growth in RPTT collections each year from 2020 through 2023, with revenue reaching just over $1.6 billion in 2023.

IBO's RPTT forecast for 2019 is virtually identical to OMB's—just $6 million higher (less than 0.5 percent). For the period 2020-2023, the trend of both forecasts is the same, but IBO's forecast of cumulative collections is about 2 percent higher.

Legislation recently passed in Albany establishes two increases in the state RPTT on high-value properties in New York City. A graduated "mansion tax" will be charged on residential transactions in the city valued at $2 million and above, and an additional increase of 0.25 percent of sales value will be added to the tax on commercial transactions valued at $2 million or higher, and on residential transactions valued at $3 million or higher. The receipts from these additional taxes will be dedicated to the Metropolitan Transportation Authority. Even though these tax increases apply only to properties in New York City, they are not considered city revenues, and are not included in IBO's forecasts.

Mortgage Recording Tax. MRT collections for the current year are forecast at just under $1.1 billion, a reduction of $63 million (5.5 percent) compared with our estimate in March. IBO's MRT forecasts for 2020 through 2023 remain unchanged from March. We project a decline in 2020, followed by modest growth through 2023.

The MRT is a tax on the value of mortgages used to purchase property, and in some cases, on the value of mortgage refinancing. Revenue from the MRT does not follow the value of real estate sales as closely as does RPTT because not all sales involve a mortgage, and for sales with a mortgage, only the portion of the purchase price that is financed by the mortgage is taxed. In addition, mortgage refinancing, which may be subject in whole or in part to the MRT, is not connected to a property sale. Finally, loans to purchase coop apartments are not considered mortgages under New York State law, and are thus not subject to the MRT.

MRT revenue hit an all-time peak of $1.6 billion in 2007, a year of strong residential sales and a high level of mortgage refinancing. MRT revenue collapsed in the wake of the 2008 financial crisis, and has never returned to pre-crisis levels. Collections peaked again in 2016, but at a much lower level of $1.2 billion. Revenue declined during the next two years, reaching $1.05 billion in 2018. IBO projects an increase to $1.1 billion in 2019, followed by a decline to $1.0 billion in 2020, and then modest growth to again reach $1.1 billion in 2023.

Changes in federal tax policy that began in calendar year 2018 restrict the scope and magnitude of the mortgage interest deduction. The maximum mortgage value whose interest can be deducted has been reduced, and the interest from home equity loans and cash-out refinancings is only deductible if the proceeds are used for "substantial renovations." These factors, combined with a limit on the deductibility of state and local taxes and an increase in the standard deduction, have reduced the tax benefits of mortgage financing for many homeowners. Ultimately these policy changes are expected to put downward pressure on the value of mortgages issued, especially home equity loans and refinancings.

Starting late in calendar year 2017, mortgage rates, which had been at historically low levels, began a steady climb. These increases coincided with hikes by the Federal Reserve in the federal funds target rate. Since the last increase by the Fed in December 2018, mortgage rates have declined. According to the Mortgage Bankers Association, the average 30-year fixed rate residential mortgage had an interest rate of 4.4 percent in the January-March 2019 quarter, down from 4.8 percent in the previous quarter. However, this decline has so far not been accompanied by a corresponding increase in MRT revenue.

IBO's MRT forecasts are consistently above OMB's. In April, OMB lowered its forecast for 2019, and raised its forecasts for 2020-2023. Currently, IBO's forecast is 1.5 percent above OMB's for 2019, in the range of 6.0 percent to 7.0 percent higher for 2020 through 2022, and 9.5 percent higher for 2023.

Commercial Rent Tax. At $880 million, IBO's 2019 forecast for the CRT is 3.1 percent above 2018 collections. IBO projects a slight decline (0.8 percent) in 2020, followed by modest growth in 2021 through 2023. For 2023, IBO projects revenue of $944 million, a 7.3 percent increase over 2019. Compared with our March forecast, IBO has made small upward adjustments in revenue: less than 1.0 percent in 2019 and 2020, and between 1.0 percent and 2.0 percent in 2021 through 2023.

The CRT is a tax imposed on tenants who rent space for business, professional, or commercial purposes in certain areas of Manhattan below 96th Street. Not-for-profit entities, subtenants, tenants located in the World Trade Center area, and tenants located in the Commercial Revitalization Program abatement zone are all exempt from the tax.

Over time both the tax rate and the geographic area subject to the tax have been reduced. A bill passed by the City Council in 2017 created a credit that eliminated the tax for tenants paying from $250,000 to $499,999 in annualized rent, provided the total income of the tenant was $5 million or less. The legislation also created partial credits for tenants paying rents in this range but who had income of $5 million to $10 million, as well as for tenants paying from $500,000 to $550,000, with income not exceeding $10 million.

IBO's CRT projections take into account the reduction in the scope of the tax, and an expected softening of average rents due to new rental space coming on line in Hudson Yards and elsewhere.

IBO's forecast of cumulative CRT collections over the entire 2019 through 2023 forecast period is virtually identical to OMB's—just $9 million (0.2 percent) lower.

Personal Income Tax. Collections of the personal income tax in March and April set new record highs and were far greater than IBO anticipated when it last forecast tax revenues two months ago, prompting a $423 million increase in our current year PIT forecast, to $13.2 billion (net of refunds). We still expect PIT revenue in 2019 to fall short of last year, however, due to the effects of federal income tax changes on the timing of taxpayer's payments. The effects of the federal tax changes will continue into next year. IBO forecasts only a small, $63 million (0.5 percent) increase in PIT collections in 2020 from the current year.

IBO's forecast of a $227 million (1.7 percent) decline in PIT revenue from 2018 to 2019 does not reflect a decline in the income of city residents. Rather, it is due to a large decrease in quarterly estimated payments reflecting taxpayer behavior in response to changes in the federal income tax that took effect on January 1, 2018. (Estimated payments, the second largest component of PIT revenue, are made by taxpayers who are self-employed or who anticipate realizing capital gains from the sale of real property and financial assets.) These changes greatly limited the amount of state and local tax liability that could be itemized as a deduction against income for federal tax purposes. As a result, in order to claim these itemized deductions before limits took effect, many New Yorkers were motivated to prepay their calendar 2018 liabilities by the end of calendar year 2017. The amount of quarterly estimated payments received in fiscal year 2018 dwarfed the amounts received in previous years, and our forecast of quarterly estimated payments in 2019 is $1.2 billion less than last year.

The city's receipt of quarterly estimated payments this past December and January—a period when most fourth (and final) quarterly installments against estimated 2018 liabilities were to be made—was particularly weak. This weakness suggests that many taxpayers concluded that their first three quarterly payments, including the early estimated payments they had made before the January 2018 deadline, were sufficient to meet calendar year 2018 liabilities. Moreover, the unexpected 19 percent decline in the stock market (as measured by the New York Stock Exchange composite index from its high in September 2018 to the end of the year) reduced the amount of capital gains that investors could realize in 2018, and likely motivated some to take strategic capital losses in order to partially offset some of their capital gains.

Estimated payments made by taxpayers filing for extensions beyond the April 15th deadline are tallied separately from quarterly estimated payments. An unexpectedly large increase in extension payments this April accounts for much of the increase in IBO's 2019 forecast. We had anticipated that many taxpayers would encounter complications when filing their 2018 returns this April—the first annual tax returns due under the new tax law—leading more of them to request extensions. Taxpayers filing for extensions typically also make an estimated payment to avoid being underpaid when they eventually file their final return. But the increase in extension payments was about $260 million more than IBO previously forecast.

The other large change in IBO's 2019 forecast stems from a $171 million increase in our estimate of state/city offsets, periodic New York State payments to the city in order to reconcile income tax accounts. The state/city offset payments are required because New York State processes both the city and state income taxes paid by city residents.

IBO's current forecast for 2019 withholding receipts—$9.6 billion—is only marginally greater than our estimate in March. Collections during the bonus-paying season (December through February) were less this year than during the same period last year, consistent with the expectation that Wall Street bonuses would be lower this winter. However, in other months withholdings were strong. On balance IBO is forecasting 2.9 percent growth in withholding for the year.

IBO's forecast of 2020 PIT revenue is $13.2 billion, only 0.5 percent greater than projected 2019 revenue. Based on the expectation that there will not be another decline in bonus compensation for calendar year 2019, IBO forecasts strong 5.1 percent growth in withholdings for fiscal year 2020. These larger withholding collections will be offset by projected decreases in collections with final returns, offset payments, and revenue from state-conducted audits. Following the gyrations of 2018 and 2019, the return of extension payments to more typical levels is another brake on PIT growth in 2020. Finally, IBO forecasts a decrease in refunds from 2019 to 2020, but its contribution to overall revenue growth will be modest. The run-up in extensions this spring is expected to result in an increase in refunds in the fall. Most taxpayers who made payments when filing for extensions end up overpaying their liabilities, with the overpayments getting refunded in the fall after they file their final returns.

After 2020, slower growth in both the local and national economies will moderate the growth of withholding and estimated payments. Through 2023, IBO projects annual increases averaging 3.2 percent, with collections reaching $14.5 billion.

IBO's personal income tax forecast exceeds OMB's by $424 million (3.3 percent) for 2019 and by smaller amounts in subsequent years. The difference between the two forecasts falls to $70 million in 2020, largely because OMB expects a much greater decrease in refunds than does IBO. After 2020, IBO's withholding forecasts are consistently higher, though withholding growth rates in the two forecasts are similar. IBO's projections of estimated payments are consistently higher than OMB's, and its refund forecasts are also consistently higher. For 2023, IBO's PIT forecast exceeds OMB's by $210 million.

Business Income Taxes. Business income tax collections are projected to yield $5.9 billion of revenue in 2019, an increase of $301 million (5.4 percent) from 2018. IBO also expects continued growth for the remainder of the forecast period, although at a more moderate pace, growing by $72 million (1.2 percent) in 2020 and averaging 2.7 percent growth in 2021 through 2023. All of the near-term growth is attributable to the city's corporate taxes, as unincorporated business tax (UBT) collections have been weak this year following a record-setting 2018.

Corporate Taxes. IBO projects that corporate tax collections net of refunds will yield $3.9 billion in 2019, an increase of $470 million (13.1 percent) over 2018. This marked growth comes after three successive years of declining revenue, and is driven by strong corporate profits and earnings in key sectors including finance, information, and services. This growth also comes amidst a return to a more stable tax policy environment, after major state and city corporate tax reform in 2015 and the federal Tax Cuts and Jobs Act of 2017.[4]

In contrast to the strength in corporate tax collections IBO forecasts for the current year, we expect revenue to contract by $61 million (1.6 percent) in 2020. This is in part a correction after the unusually strong growth in 2019 and in part a response to the sharply slower economic growth IBO expects to begin in the second half of the calendar year. Moderate growth is projected to return after that, with revenue increasing by $59 million (1.5 percent) in 2021 and by $142 million (3.7 percent) in 2022, before another modest contraction of $37 million (0.9 percent) in 2023. By the end of the forecast period, corporate taxes are expected to yield $4.0 billion in net revenue, a level which has not been reached since 2015.

IBO's forecast for 2019 is $37 million (1.0 percent) higher than OMB's, resulting from slightly higher projections for sustained fourth quarter growth. Our projections are higher throughout the rest of the forecast period as well, including a difference of $124 million (3.3 percent) in 2020, and an average of $209 million (5.5 percent) from 2021 through 2023. This is consistent with IBO's expectations for economic growth, which are higher than OMB's in each year of the financial plan except calendar year 2020.

Unincorporated Business Tax. Unlike the corporate taxes, collections of the unincorporated business tax have been particularly weak in 2019. IBO projects final net revenue of $2.0 billion, a decline of $169 million (7.7 percent) from the record collections seen in 2018. This year's expected decline erases that growth and returns collections to 2017 levels.

IBO's forecast for 2019 is $89 million (4.2 percent) lower than OMB's current projection of $2.1 billion. This is a larger difference than usually observed at this point in the budgetary cycle and is driven by IBO's analysis of collection patterns so far this year. Year-to-date net collections through April are down by 10.7 percent, with the heaviest declines concentrated in December and January. Although there has been some improvement in recent months (particularly from the services sector, which is the largest contributor of UBT revenue), IBO does not expect collections in the final quarter to improve quickly enough to overcome the losses already sustained.

After declining in 2019, growth is expected to resume for the remainder of the forecast period. UBT revenue is projected to reach $2.1 billion in 2020, an increase of $133 million (6.6 percent). Despite the difference in projections for the current fiscal year, IBO's forecast for 2020 is almost identical to OMB's—a difference of just $6 million (0.3 percent). The convergence reflects IBO's expectation of a stronger growth in UBT collections despite the weakness in economic activity that both IBO and OMB project for calendar year 2020. We expect the slowdown to have a greater impact on corporate tax revenue than on collections of the UBT, which has historically been slower to react to changes in the economy. In 2021 through 2023, growth is expected to continue at an annual average of $112 million (5.0 percent), generating $2.5 billion in net UBT revenue by the latter year. This projection of long-term growth is bolstered in particular by the expectation of continued strength in key earnings sectors, including professional services.

General Sales Tax. Although sales tax collections have remained strong so far this year, revenue growth was not quite as brisk as IBO anticipated in March. Accordingly, we have slightly lowered our forecast of 2019 revenue to $7.8 billion, 5.2 percent above collections in 2018. Robust growth of 5.5 percent is projected for 2020, yielding $8.3 billion in sales tax revenue. For the remainder of the forecast period we expect revenue growth to slow to an average annual rate of 3.1 percent, with sales tax revenue reaching $9.1 billion in 2023.

Continued growth in employment and personal income in New York City has generated strong retail spending by residents and commuters. Moreover, the city's resilient tourism sector has fueled spending by domestic and foreign visitors. Though the cap on federal individual income tax deductions for state and local taxes and mortgage interest payments took a bite out of the disposable income of many New York metropolitan area households in calendar year 2018, income growth has picked up steam recently. With Wall Street rebounding from its late calendar year 2018 slump and reaching record highs in recent months, wealth effects on consumer spending have once again strengthened.

IBO expects the slowdown in the nation's economic growth in calendar years 2020 and 2021 to dampen consumer spending and slow the growth of sales tax revenue to 2.8

percent in fiscal year 2021. Revenue growth is projected to pick up modestly in the last two years of the forecast period to an annual average rate of 3.3 percent.

Challenges facing the retail industry have constrained increases in sales tax revenue over the past few years. Competition from e-commerce has pressured retail establishments all over the country, including in New York City, where many well-known brick and mortar stores have closed. Businesses in the city also face ever-increasing costs of operation, particularly wages, which have risen with increases in the minimum wage.

The impact of online competition on local sales tax collections may be changing with June's United States Supreme Court decision in *South Dakota v. Wayfair*. The ruling permits states to force out-of-state sellers to collect sales taxes on sales to in-state residents. New York State has yet to enact legislation dealing comprehensively with Internet sales under the new legal framework, although some previous state legislation had already extended sales tax collection obligations for some large Internet retailers. The state's one post-Wayfair initiative was included in the state's 2019-2020 Executive Budget, which eliminated a previously existing tax advantage for online sellers. Operators of online marketplaces such as eBay with annual sales exceeding $300,000 and at least 100 sales of tangible personal property to New York customers are now required to collect and remit New York state and local sales taxes. While this provision, effective June 1, 2019, will increase sales tax collections, the revenue gain to the city may be limited—or potentially even negative. The legislation expanding the obligation to collect tax to marketplace providers also includes provisions diverting defined amounts of city sales tax revenue to the Metropolitan Transportation Authority.[5] If the new revenue does not exceed the amount to be diverted, the change could result in a net loss of sales tax revenue for the city.

IBO's and OMB's sales tax forecasts for 2019 and 2020 are virtually identical. Both IBO and OMB expect that sales tax revenue growth will slow after 2020, with IBO projecting annual revenue growth averaging 3.1 percent for 2021 through 2023 compared with 3.4 percent for OMB. As a result, IBO's forecast of sales tax revenue in this period is slightly lower than OMB's—by $64 million (0.7 percent) in 2021, with the difference increasing to $84 million (0.9 percent) by 2023.

Hotel Occupancy Tax. Collections of the hotel occupancy tax have remained strong in 2019, prompting IBO to increase its current year hotel tax forecast to $629 million, a 5.3 percent gain over 2018. After this year, we expect far more modest revenue growth. IBO forecasts hotel tax revenue of $637 million in 2020, growth of 1.2 percent. In 2021 through 2023 growth is expected to average 1.6 percent annually, with total revenue reaching $665 million by the latter year.

The increase in hotel tax revenue in 2019 is the fastest since 2014. Prolonged expansion of the U.S. economy, the accompanying growth in disposable income, and a robust flow of foreign visitors (who typically spend more than domestic travelers) over many years has led to ongoing increases in hotel stays, fueling tax revenue growth. Hotel occupancy rates have remained high even while the inventory of rooms has expanded, and employment growth in the city's leisure and hospitality industry has outpaced growth in other sectors.

IBO's expectation of slower hotel tax revenue growth after 2019 stems from our forecast of weaker domestic economic growth, competitive challenges facing the hotel industries, and factors that could curtail international tourism. The anticipated slowdown of the U.S. economy through calendar year 2021 will put downward pressure on disposable income, constraining household spending on tourism and corporate spending on business travel. The large number of hotels scheduled to open soon, plus others under construction, will increase the supply of hotel rooms and make it more difficult for hotels to raise room rates. Since the hotel occupancy tax is effectively a percentage of the room charge, this could in turn slow increases in hotel tax revenue, unless the number of room nights expands enough to offset the revenue lost to lower rates. Competition from accommodation platforms like Airbnb providing less costly alternatives within the five boroughs and the larger metro area will also cut into the number of hotel stays. The clientele for non-hotel accommodation has been sizable enough to convince Marriott to launch a home-rental platform with over 2,000 high-end homes in 100 large U.S. markets and other hotel companies are considering similar moves.

While international visits to New York have not been noticeably affected by the economic ebbs and flows in the past decade, tight immigration policies may become a hurdle for some tourists. Also, the uncertain outcomes of trade talks with China and the United Kingdom's troubled exit from the European Union could discourage business and leisure travel from these nations—the top two countries in sending visitors to New York City, together accounting for over 17 percent of foreign visits in 2018.

Although IBO projects higher hotel occupancy tax revenue than OMB for each year of the forecast period, the differences are relatively modest. Our current year forecast is only $3 million (0.5 percent) higher than forecast by OMB, with the difference growing to $14 million (2.2 percent) in 2021 before declining over the remainder of the financial plan period.

Spending

After adjusting for current-year expenses paid for with prior-year resources, non-recurring expenses, and for expenses such as reserve funds that are not allocated to specific agencies or program areas, IBO estimates that city-funded spending in 2020 will be $70.6 billion. The 2020 plan is $2.0 billion, or 3.0 percent, greater than the adjusted current-year budget. Between 2018 and 2023, the adjusted city-funds spending is expected to grow by $11.4 billion, or approximately 3.3 percent annually. IBO projects that the total budget (including all funding sources), when similarly adjusted will be $95.2 billion in 2020—$798 million more than the $94.4 billion we estimate adjusted spending will total in the current year. We project that total adjusted spending will increase by 2.8 percent annually, on average, from 2018 through 2023, rising to $101.4 billion in the final year.

Factors Driving Spending Growth. After adjusting for prepayments, citywide agency spending growth averages 1.1 percent across the plan period. Much of the growth in spending over the next four years results from increases in two areas: fringe benefits for city employees and debt service (note that most fringe benefits and all debt service are not carried within the budgets of city agencies). IBO estimates that in 2019 the city's expenditure on debt service and fringe benefits comprise 18.4 percent of the entire city budget. By 2023 these two expenses will make up 21.7 percent of the budget.

IBO projects that citywide fringe benefit costs will total $10.6 billion in 2019, about 15.5 percent of total adjusted city-funded spending. Fringe benefit costs increase in each year of the plan period, reaching $13.3 billion, or 17.4 percent of adjusted total city-funded expenditures by 2023, an annual average growth rate of 5.9 percent. The single largest factor driving growth in fringe costs is health insurance. After accounting for the health care savings attributed to the last two rounds of labor settlements with the municipal unions, IBO estimates that health insurance costs will still increase by an average of 3.8 percent per year from 2019 through 2023.

After adjusting for the prepayment of current-year debt service costs with prior-year resources, IBO estimates that the city's debt service expenditures will total $6.6 billion in 2019 (7.0 percent of total adjusted city spending). We project the city's debt service cost will reach $7.2 billion in 2020, an 8.1 percent increase. By the end of the financial plan period we project that debt service costs will total $9.1 billion (8.8 percent of total adjusted city expenditures), an increase averaging 8.3 percent a year from 2018 through 2023.

Expenditure Re-estimates. IBO estimates that total city-funded spending will exceed OMB's estimates in the Executive Budget for each year of the financial plan: the difference is $139 million in 2019, $100 million in 2020, $264 million in 2021, $169 million in 2022, and $48 million in 2023.

Lower Than Projected Spending in Certain Areas. Although total spending is expected to be higher than the Mayor's budget anticipates, there are areas where IBO projects lower spending. Notably, IBO's forecast includes two areas in which expenditures will be lower than budgeted, debt service and the provision of health insurance for city employees and retirees.

Debt Service Savings. Although IBO projects that debt service costs will grow at a faster rate than other major city expenses, we expect these costs will be lower than the de Blasio Administration has assumed for 2020 in the Executive Budget. OMB has reduced its variable interest rate assumptions for 2019 but has left its rates for 2020 unchanged. The rates assumed by OMB for 2020 are much higher than current forecasts. IBO's assumption of lower variable rate interest reduces our forecast of debt service costs by $68 million in 2020.

Health Care Costs Savings. The city's provision of health insurance for current and retired city employees is budgeted to total $6.3 billion in 2019 and $7.2 billion in 2020. By 2023 these health care costs are budgeted to increase to $8.7 billion. Based on recent trends in spending, and our own forecast of growth in health care costs, IBO estimates that the city will spend $177 million less on health care than OMB projects for 2020, with $65 million of the savings in the Department of Education (DOE). By 2023, IBO's forecast of health care spending is $431 million below OMB's, with $161 million of the savings attributable to DOE.

Higher Spending. Savings derived from IBO's re-estimates of debt service and health insurance are more than offset by our estimates of higher-than-budgeted/

IBO Expenditure Projections-Adjusted for Prepayments *Dollars in millions*							
		Plan					Average Change
	Actuals 2018	2019	2020	2021	2022	2023	2018 -2023
Agency Expenditures	$64,023	$68,207	$65,980	$66,300	$67,053	$67,456	1.1%
Fringe Benefits	9,912	10,642	11,394	11,854	12,527	13,229	5.9%
Labor Reserve	-	518	1,821	2,237	1,619	2,078	n/a
Total Agency Expenditures	**$73,935**	**$79,367**	**$79,195**	**$80,391**	**$81,199**	**$82,763**	**2.3%**
Other Expenditures							
Debt Service	$6,077	$6,631	$7,170	$7,625	$8,315	$9,070	8.3%
Pensions	9,626	9,936	9,951	10,118	10,564	10,620	2.0%
Judgments and Claims	730	697	712	727	742	758	0.8%
Subtotal Recurring Expenses	**$90,368**	**$96,631**	**$97,028**	**$98,861**	**$100,820**	**$103,211**	**2.7%**
General Reserve	-	$50	$1,000	$1,000	$1,000	1,000	n/a
Capital Stabilization Reserve	-	-	250	250	250	250	n/a
Other Adjustments	-	(400)	(1)	65	173	300	n/a
Subtotal Non-Recurring Expenses	**-**	**($350)**	**$1,249**	**$1,315**	**$1,423**	**$1,550**	**n/a**
Less: Intra-City Expenditures	($2,197)	($2,220)	($1,819)	($1,817)	($1,815)	($1,814)	n/a
TOTAL EXPENDITURES	**$88,171**	**$94,061**	**$96,458**	**$98,359**	**$100,428**	**$102,947**	**3.1%**

NOTES: Adjustments for prepayments include $4.18 billion of 2017 resources to prepay 2018 expenses, $4.58 billion of 2018 resources to prepay 2019 expenses, and $3.9 billion of 2019 resources to prepay 2020 expenses. Other non-recurring adjustments include reserve funds, energy, lease, and non-labor inflation adjustments. Figures may not add due to rounding.

New York City Independent Budget Office

expected expenditures for overtime in uniformed agencies, education, homeless services, housing, parks, the Campaign Finance Board (CFB), and the Department of Small Business Services.

Uniformed Agencies Overtime Expenses. The city's uniformed agencies often underestimate their annual cost for overtime expenses. IBO projects that over the financial plan period the budgets for the police department (NYPD), fire department (FDNY), and Department of Correction (DOC) will require $66 million of additional city funds in 2019 and $115 million of additional city funds each year from 2020 through 2023 for overtime expenses.

Through March 2019 the NYPD has spent $551 million of $634 million budgeted for the department's overtime expenses. IBO estimates that the NYPD will spend an additional $50 million in the current year and in each year of the financial plan period; an increase of approximately 8 percent over the amount currently budgeted for overtime expenses in the department.

Similarly, IBO estimates that the fire department's current plan for overtime expenditures is underfunded. Through March 2019 the FDNY has spent $247 million of the $328 million budgeted for this year. The department has budgeted only $259 million for overtime expenses in 2020, decreasing to $244 million by 2023. We assume that the FDNY will need an additional $50 million annually from 2020 through 2023 (a 20 percent increase over the approximately $250 million budgeted annually for overtime expenses at the FDNY.

The Department of Correction's planned expenditures for overtime are also typically less than the actual year-end totals. In the current year to date the DOC has spent over $18 million on civilian overtime expenses, more than double the $7.1 million the department budgets each year for civilian overtime. Based on current levels of spending, we estimate that the DOC will require an additional $16 million of city funds in 2019 and $15 million in each year from 2020 through 2023 to cover the cost of civilian overtime.

Uniformed Agency Non-City Funding. The uniformed agencies, particularly the NYPD and FDNY, rely on millions of dollars from the federal and state governments to fund operations. The Executive Budget assumes $249 million of federally funded spending by the NYPD in 2019, decreasing to $15 million in 2023. Over the previous three years the NYPD averaged $275 million of federally funded expenditures. Based on the department's recent funding history, IBO estimates that the NYPD will receive an additional $200 million a year in 2020 through 2023 from the federal government. In addition, IBO assumes the NYPD will receive $50 million of additional state funding each year above what is presented in the financial plan for 2020 through 2023.

Federal funding for the FDNY has averaged $180 million over the previous three years. The Executive Budget assumes annual federal funding for the department that is much lower than recent experience would suggest, $40 million in 2020 declining to $23 million by 2023. We estimate that the department will have an additional $50 million of federally funded expenditures in 2019 and an additional $100 million in each year from 2020 through 2023.

Department of Education Re-estimates. Based upon recent enrollment trends, IBO projects that charter school enrollment will increase more rapidly than estimated by the DOE as a result of the schools continuing to expand by adding new grades. For 2020, we anticipate 1,340 more charter school students than estimated by the Mayor. By 2021, we project an additional 4,146 more charter school students than the city's estimate. For 2023, our charter school enrollment projection exceeds the city's by over 9,200. As a result, IBO projects that the DOE's charter school costs will be greater than planned by $22 million in 2020, $67 million in 2021, $110 million in 2022, and $150 million in 2023.

Each year the DOE submits certain expenses for reimbursement through Medicaid. In previous years the department's ability to file claims for reimbursement was limited by problems implementing a new system for tracking these expenses, which led to lower-than-expected Medicaid reimbursements. The department finally appears to have surmounted these issues and has begun an aggressive strategy to submit even more expenses for reimbursement. In the Mayor's latest financial plan the DOE assumes nearly $27 million in each year from 2020 through 2023 for Medicaid revenue generated from submitting claims for charter school students as well as for certain transportation expenses. Because the DOE has not previously received the data from charter schools and certain transportation expenses have yet to be approved by the state, IBO assumes this reimbursement will not occur. Based on this assumption, we have increased our projection of DOE expenditures by about $27 million each year from 2020 through 2023.

Homeless Services. Based upon recent trends in the single adult homeless shelter population, IBO estimates that funding levels in the Executive Budget for single adult shelters are inadequate to cover the need for services in the plan period. Accordingly, we estimate that Department of Homeless Services (DHS) will require an additional $24 million in 2019 and an additional $83 million each year from 2020 through 2023 to provide for the single adult homeless shelter population. In addition, IBO projects that the city's estimate for the cost of providing adult family shelters is understated. We estimate that this will require additional spending of $8 million in 2019 growing to $13 million in 2020 through 2023.

Based upon current trends, it appears that the city has overestimated the amount of federal funding for the provision of shelter for families with children. Bringing the out-years of the plan in line with recent experience, IBO projects that DHS will require an additional $24 million of city-funds, annually, in 2020 through 2023 to replace lower-than-expected federal funding. IBO expects some additional federal funding for adult family shelter costs as well as additional funds through the federal Emergency Shelter Grant that the city historically receives but OMB has not budgeted for in the out-years of the plan. IBO expects a similar small increase in the budget for state funding for adult family shelter costs in each year of the financial plan.

Housing Program Needs. A number of the Department of Housing Preservation and Development's (HPD) programs are typically underfunded in the out-years of the financial plan. Based on our analysis of historical spending, IBO estimates that the agency will require an additional $14 million in 2020 increasing to $15 million annually for 2021 through 2023. This includes funding for emergency housing needs, the Alternative Enforcement Program, foreclosure buyback, and other anti-abandonment preservation programs.

Parks Department Underfunding. Based upon historical agency spending over the last five years, IBO projects that the parks department's budget is underfunded in areas such as recreation, city zoo expenses, executive management, and human resources operations. IBO estimates that the parks department will require an additional $6 million of city funds in 2019 and $8 million each year from 2020 through 2023 to fund these agency operations at historical levels.

Campaign Finance Board Re-estimate. The city's Campaign Finance Board budget is often underfunded in the out-years of the financial plan. Based upon the agency's recent annual expenditure history for election years, IBO estimates that CFB will require an additional $20 million in city funds for 2021 and 2022, the next years in which citywide elections

Pricing Differences Between IBO and the de Blasio Administration
Items that Affect the Gap
Dollars in millions

	2019	2020	2021	2022	2023
Gaps as Estimated by the Mayor	**-**	**-**	**($3,481)**	**($2,880)**	**($3,158)**
Revenue					
Taxes					
Property	$111	$436	$450	$700	$1,163
Personal Income	424	70	279	266	210
General Sales	2	(7)	(64)	(77)	(84)
Business Corporation	37	124	177	257	194
Unincorporated Business	(89)	6	(13)	45	68
Real Property Transfer	6	25	30	27	26
Mortgage Recording	16	67	70	58	96
Utility	5	13	3	1	(4)
Hotel Occupancy	3	10	14	11	7
Commercial Rent	(7)	3	14	2	(21)
Cigarette	-	-	-	-	-
Other Taxes and Audits	-	-	-	-	-
Total Taxes	**$508**	**$747**	**$960**	**$1,288**	**$1,656**
STaR Reimbursement	-	-	-	-	-
Misc. Revenue	6	28	31	32	31
TOTAL REVENUE	**$514**	**$775**	**$991**	**$1,320**	**$1,687**
Expenditures					
Debt Service	$-	$68	$-	$-	$-
Fringe Benefits:					
Health Insurance-Education	(13)	65	57	112	161
Health Insurance-City University	(1)	3	2	5	8
Health Insurance-All Other Agencies	(21)	109	91	173	262
Education	-	(48)	(93)	(137)	(176)
Homeless Services	(32)	(120)	(120)	(121)	(121)
Fire	-	(50)	(50)	(50)	(50)
Police	(50)	(50)	(50)	(50)	(50)
Correction	(16)	(15)	(15)	(15)	(15)
Small Business Services	-	(40)	(43)	(43)	(43)
Housing	-	(14)	(15)	(15)	(15)
Parks	(6)	(8)	(8)	(8)	(8)
Campaign Finance Board	-	-	(20)	(20)	-
TOTAL EXPENDITURES	**($139)**	**($100)**	**($264)**	**($169)**	**($48)**
TOTAL IBO PRICING DIFFERENCES	**$375**	**$675**	**$727**	**$1,151**	**$1,639**
IBO Prepayment Adjustment 2019/2020	(375)	(675)	1,050	-	-
IBO SURPLUS/(GAP) PROJECTIONS	**-**	**-**	**($1,704)**	**($1,729)**	**($1,519)**

NOTES: Negative pricing differences (in parentheses) widen the gaps, while positive pricing differences narrow the gaps. Remaining bankingcorporation tax revenues reported with general corporation tax. Figures may not add due to rounding.

New York City Independent Budget Office will be held, including races for Mayor and Comptroller when the incumbents will not be eligible to run.

Small Business Services Additional Program Funding. In 2014 the City Council approved a one-year allocation of funds to supplement the wages of certain school bus drivers, attendants, dispatchers, and mechanics who had experienced sizable reductions to their wages following the rebidding of bus contracts. Initially the supplemental wages were to be made available for only one year and capped at $42 million. But funding has been added by the de Blasio Administration each year since 2014. In the Executive Budget OMB provided funding for the supplemental wages in 2019 but did not add any funds in the out-years of the plan. IBO assumes that the de Blasio Administration will continue the pattern of providing these wage supplements; based upon prior year funding levels we estimate that the agency will require an additional $39 million in 2020 and $42 million annually in 2021 through 2023.

In addition, based upon historical spending patterns, we estimate that the city will continue to fund the Neighborhood Development Grant Initiative. This program has been funded every year since 2016, with an average of $1.3 million expended each year. The Executive Budget includes funding for this initiative in 2019 but in none of the out-years of the plan. IBO assumes the department will require an additional $1.3 million each year from 2020 through 2023.

New Spending. Most of the new agency spending in the Executive Budget for 2019 and 2020 is related to unforeseen increases in the cost of city services or to account for shortfalls in state-funding estimates or new unfunded state mandates. Nearly the entirety of new city-funded agency spending in these years appears in five agencies: the Department of Education, the Department of Homeless Services, the Board of Elections, the Department of Health and Mental Hygiene (DOHMH), and the Department of Social Services (DSS).

Costs Related to Actions in Albany. The Mayor's Executive Budget includes an additional $63 million in 2019 and $305 million in 2020 prompted by actions taken in Albany that affect the city's provision of services. The state's 2019-2020 adopted budget altered the formula by which federal Temporary Assistance for Needy Families (TANF) is allocated to the city. As a result of this change the city is now responsible for 10 percent of the TANF costs for family assistance formerly covered entirely with federal funds. This action increases the city's 2019 expenses by $63 million rising to $125 million a year in 2020 through 2023. (For additional details see these two IBO reports: here and here)

The Mayor added nearly $60 million to the Department of Health and Mental Hygiene's budget in each year from 2020 through 2023 to make up for a reduction in Article 6 state funding for a variety of public health programs. The state's reduction in its reimbursement formula—from 36 percent to 20 percent—would have affected core public health programs including family health, disease control, disease preparedness, environmental health, and emergency preparedness.

The passage of voting reform legislation in Albany, which included the implementation of early voting and electronic poll books, created an unfunded mandate that the city estimates will cost $96 million in 2020. Finally, $48 million of additional state aid came in the form of building aid for debt service, which required the city to add an additional $25 million to the DOE.

Other New Needs. The DOE's 2019 budget includes an additional $314 million in new needs for 2019, which grows to $356 million by 2023. The additional costs for 2019 include $203 million for students with disabilities placed in private schools (referred to as "Carter cases") to enable the department to expedite the process as well as for increases in tuition expenses. Another $59 million was added to cover the cost of additional bus routes and $38 million to fund the underestimated lease costs for charter schools and other DOE-leased sites. In 2020, in addition to adding funds for Carter cases, the department also required $33 million to accelerate increases in special education capacity and $88 million in supplementary funding to cover statutory increases in charter schools' tuition.

In addition to the state mandated costs, the Board of Elections added $44 million in 2020 and $27 million in each of the remaining years of the financial plan to increase baseline funding of the agency and adjust its out-year funding to keep it more in line with actual expenditures.

The Mayor's budget includes an additional $40 million in 2019 and $75 million each year in 2020 through 2023 in the Department of Social Services' budget for cash assistance and rental subsidies. In recent plans DSS had been using outdated figures and growth rates to determine the size of its cash assistance budget. IBO has routinely repriced the agency's budget to include the additional funds necessary to meet the actual demand for assistance. These new funds bring the budget for cash assistance in line with IBO's estimates.

Savings Plan/PEGs. Upon the release of the Preliminary Budget in February, Mayor de Blasio announced that the Executive Budget and financial plan would include a Program to Eliminate the Gap. This was significant because it was the first time the de Blasio Administration initiated a PEG, which required agencies to meet specific spending reduction targets. The Mayor set a PEG target of $750 million for 2019 and 2020. According to IBO's analysis, the Executive Budget PEG exceeds the target, with $905 million of additional resources attributed to the PEG for 2019 and 2020. We estimate the annual savings from the PEG decreases in the out-years to $338 million by 2023.

The Mayor's announcement of the savings program specified that a portion of the PEG total was to be attained through the expansion of the city's existing partial hiring freeze. Unlike the existing freeze, however, the new savings are not derived from delays in hiring but rather from the elimination of specific vacant positions. The expanded hiring freeze policy permanently eliminates 1,363 city-funded vacant positions across city agencies, including 232 civilian positions at the police department and 181 positions at the Department of Education. The hiring freeze provides $95 million of savings in 2019 and 2020, or slightly over 10 percent of the PEG total for those years. OMB projects that the elimination of these vacancies will reduce expenditures by over $118 million in 2023.

IBO estimates that the single largest portion of the PEG for 2019-2020, comprising 30.5 percent of the plan, will be achieved through the realization of newly identified revenue. The program assumes nearly $280 million of additional revenue in 2019 and 2020, including $63 million in prior year revenue for 2019—revenue that is attributable to prior years but not recognized in previous financial plans.

Debt service savings provides an additional $132 million (14.4 percent) of the total PEG for 2019 and 2020 with re-estimates of agency costs accounting for $153 million (16.7 percent) of the program. IBO estimates savings from accruals—an expense that was budgeted but will not be spent, such as a vacancy that is budgeted for but has yet to be filled—to total nearly $59 million (6.4 percent) of the 2019 and 2020 PEG, while approximately $58 million (6.3 percent) of the PEG will be achieved through agencies substituting non-city funds to cover expenses currently funded with city-generated revenue.

Efficiencies. OMB assigns each initiative within the savings program into one of two categories: those that generate savings by improving agency efficiency and those that generate savings through other means. According to OMB, 45.7 percent of the PEG for 2019 and 2020 and 63 percent of the cumulative savings program through 2023 result from initiatives that increase agency efficiency.

IBO's analysis of the PEG for 2019 and 2020 suggests that the share of resources derived from efficiency initiatives is less than OMB projects: roughly 15 percent, or $142 million, of the total $905 million PEG. For the financial plan period as a whole, we classify 23.6 percent of the savings as resulting from efficiency initiatives. The reason IBO finds a much smaller share of the program's savings attributable to efficiencies than OMB is in large part due to OMB classifying the expanded hiring freeze as efficiency.

IBO defines efficiency initiatives as providing the same level of service with fewer resources. Resources derived from efficiency initiatives would not necessarily occur without the agency making a proactive effort. The DOE's initiative to further centralize procurement practices to lower the cost of acquiring goods is a good example of an efficiency proposal. IBO does not consider the enhanced hiring freeze, which is essentially a vacancy reduction plan, to meet these requirements.

Newly Identified Revenue Is Largest Component of PEG Savings, 2019-2020
In thousands

	2019	2020	2021	2022	2023	Total
Hiring Freeze	($4,107)	($90,935)	($113,015)	($16,635)	($118,193)	($442,885)
Efficiency	(5,969)	(124,161)	(98,124)	(91,013)	(91,334)	($410,601)
Additional Revenue	(217,265)	(55,894)	(42,814)	(41,036)	(41,036)	($398,045)
Reestimates	(59,344)	(93,592)	(71,806)	(71,871)	(72,006)	($368,619)
Debt Service	(94,718)	(37,241)	(11,316)	(72)	5,612	($137,735)
Funding Swap	(11,036)	(46,653)	(21,858)	(14,641)	(14,641)	($108,829)
Accruals	(27,347)	(31,570)	(1,500)	(1,500)	(1,500)	($63,417)
Vacancies	-	(5,126)	(5,126)	(5,126)	(5,126)	($20,504)
Total	**($419,786)**	**($485,172)**	**($365,559)**	**($341,894)**	**($338,224)**	**($1,950,635)**

SOURCE: Mayor's Office of Management and Budget

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Capital Expenditures. The city-funded portion of the Executive Capital Plan for 2019 through 2023 totals $79.9 billion, $2.4 billion (3.1 percent) more than the Preliminary Capital Plan. The city-

Largest Cuts of Currently Vacant Jobs in Police, Education, and Social Services Departments

Agency	Headcount Reduction	Total Full-Time Agency Headcount as of January 2019
Police Department	232	52,245
Department of Education	181	133,227
Department of Social Services	107	12,765
Administration for Children's Services	90	6,835
Department of Buildings	85	1,580
Department of Information, Technology & Telecommunications	72	1,532
Department of Finance	68	1,910
Department of Sanitation	61	10,068
Department of Health and Mental Hygiene	60	5,552
Department of Transportation	58	4,896
Department of Parks and Recreation	54	4,142
Fire Department	54	16,978
Department of Correction	46	12,127
Law Department	41	1,690
Department of Small Business Services	26	264
Housing Preservation and Development	20	2,292
Department of Environmental Protection	19	5,838
Financial Information Services Agency	15	434
Office of Payroll Administration	11	155
Department of Consumer Affairs	10	403
Office of Administrative Trials & Hearings	10	297
Department of Youth & Community Development	9	479
Business Integrity Commission	6	78
Department for the Aging	6	298
Department of Citywide Administrative Services	6	2,361
Department of City Planning	5	302
Department of Probation	4	1,149
Department of Cultural Affairs	3	53
Department of Records and Information Services	2	64
Department of Emergency Management	1	185
Landmarks Preservation Commission	1	74

SOURCE: Mayor's Office of Management and Budget

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funded Executive Ten-Year Capital Plan for 2020 through 2029 totals $110.7 billion, $12.4 billion (12.6 percent) more than the preliminary 10-year plan. Most of the increase from the preliminary to the executive plan occurs in 2022 through 2026 and is attributable to the de Blasio Administration's addition of $8.7 billion for the construction of four new borough-based jail facilities.

As a result of shifting commitments to the latter years of the Executive Capital Plan, only 18.5 percent of the entire 2019-2023 plan is now scheduled for the current year. But the capital plan remains well balanced across the years as planned commitments in 2022, the largest year of the five-year plan in dollar terms, make up only 22.1 percent of the entire plan's commitments. In contrast, the 10-year plan continues to be front-loaded, with over 71 percent of the city-funded plan intended for 2020 through 2024.

Apart from the Department of Correction with its borough-based jail initiative, the agencies with the biggest increases in their 10-year-plan city-funded capital programs include $903 million for the Department of Transportation, $761 million for the Department of Education, and $652 million for the Department of Citywide Administrative Services.

Pressure Points. While some of the risks highlighted by IBO in recent reports have abated—including those related to state budget actions and the cost of labor settlements for municipal employees—a number of issues have the potential to disrupt the balance of the financial plan.

Housing Authority. Earlier this year the city agreed to the terms of a settlement with the federal government to settle pending litigation related to a number of accusations against the New York City Housing Authority (NYCHA). The authority had been accused of negligence and mismanagement in exposing its tenants to dangerous levels of toxic materials as well as for failing to provide for basic levels of housing quality. The settlement agreement requires NYCHA to meet improved performance goals on a set schedule under the oversight of a federal monitor. The city is also required to provide an additional $2.2 billion over the next 10 years for improvements to NYCHA's housing infrastructure. This funding is on top of the city's previously planned $2.0 billion in capital support for a total city investment of $4.2 billion planned by 2028. The settlement does not require the federal government to provide any additional support outsides its customary, annual capital grant allocation, which the authority expects to total approximately $2.3 billion over the next five years.

The settlement with the federal government requires NYCHA to meet specific deadlines for the completion of projects in four critical areas: lead paint and mold remediation, heat restoration, elevator repair, and pest control. If NYCHA does not meet these deadlines the federal monitor has the power to allocate or reallocate resources to assure that the projects are completed. While it is possible that the funding allocated in the settlement agreement will be adequate to ameliorate some of the specific problems identified in the agreement, it is likely that the current funding will not be sufficient to meet all of these targets. According to NYCHA's own needs assessment, its housing portfolio currently has approximately $32 billion of critical needs and a total capital need of $45 billion to bring all NYCHA properties into a state of good repair. It would cost NYCHA approximately $4 billion over the next five years just to make all the repairs outlined in its needs assessment for elevators and heating systems—nearly twice what the city is required to contribute in the settlement and more than 60 percent of the housing authority's current five-year capital plan. (For more details see IBO's recent report.)

While NYCHA has developed a plan (NYCHA 2.0) that may allow the authority to generate new revenue to address some of its additional capital needs, none of this funding is included in the authority's capital plan. Recent history suggests that it is unlikely that funds needed for repairs in excess of what is already budgeted would come from Washington or Albany—leaving the city to pick up the tab or face the consequences of even greater federal control.

Health + Hospitals. The current financial plan for Health + Hospitals (H+H) projects that absent revenue and savings actions anticipated in its latest transformation plan, the hospital system would face operating budget shortfalls of $1.1 billion in 2019 increasing to $2.0 billion in 2023. The transformation plan to close the gaps relies on efforts to maximize patient volume and revenue while also reducing operating expenses. On the revenue side, the plan includes initiatives to improve billing, documentation, and authorization practices; secure higher reimbursement rates; ensure all eligible uninsured patients are signed up for Medicaid or other insurance, including MetroPlus, H+H's insurance program; and expand the system's retail outpatient pharmacies to serve both insured and uninsured patients. Cost savings targets include efforts to improve procurement efficiency, consolidate certain services, use space more efficiently, and reduce workforce expenses in nonclinical settings.

Even if the transformation plan is successful, however, the relief could be short-lived because H+H faces a scheduled cut in federal Disproportionate Share Hospital (DSH) funds. These funds are intended to help hospitals, including those operated by H+H, serving a disproportionately large share of uninsured patients. The cutback in DSH payments has been delayed several times since 2014, but is now scheduled to take effect in 2020. H+H's financial plan assumes that the DSH cut will take effect, leading to budget shortfalls as early as 2021, even if the transformation plan is successfully implemented.

H+H reports modest progress with its revenue-cycle initiatives and MetroPlus enrollment efforts. However, the number of outpatient visits have yet to significantly increase. A growing proportion of MetroPlus spending is also still going to non-H+H providers. The latest update on the transformation plan included lower than previously expected revenue gains and somewhat less expense savings than planned for 2019. H+H now assumes the transformation plan initiatives will generate $81 million (6.8 percent) less in revenue and/or savings for 2019 than projected just a few months ago, as some initiatives have taken longer to get underway than anticipated and more nurses were hired to improve patient care.

With less from the transformation plan in 2019, H+H is now expected to end this year with a cash balance of $781 million. While positive cash balances are still projected through 2023—assuming the transformation plan is successfully implemented—the closing cash balance that year is now expected to be only $83 million. If the DSH cut were delayed again or permanently scrapped, the balances would be substantially larger.

The financial stability of H+H is critical for the provision of medical services to the city's neediest populations. If the transformation plan were to unravel or changes in federal health care policies were to reduce the various supports for safety net systems, the city would likely have to boost its financial assistance to H+H—currently about $2 billion a year—to contend with budget shortfalls.

Public Transportation Infrastructure Costs. Needed repairs and improvements of the Metropolitan

Transportation Authority's (MTA) subway and bus system continue to present a huge potential liability for the city. Under pressure from the state, in 2018 the Mayor agreed to provide half the $856 million cost of an emergency Subway Action Plan aimed at stabilizing the city's deteriorating subway system; the state is providing the other half of the funds. The MTA's plan includes $2.7 billion of capital funding from the city towards the authority's current $33.3 billion capital plan. This plan is not adequate to address all of the system's critical needs, however. The MTA has estimated that it could cost an additional $40 billion or more to properly modernize the city's subway system over the next decade.

In April the state passed legislation creating a congestion pricing plan for the Manhattan central business district. This plan along with the surcharge on for-hire and taxi trips enacted last year will generate $1 billion in estimated annual revenue, which would enable the MTA to issue up to $15 billion in bonds for improvements to the city's public transportation infrastructure. When coupled with the revenue from expanding the sales tax to include Internet marketplace providers, the expanded real property transfer tax, and a new city mansion tax, the MTA expects to have $25 billion in additional bonding capacity.

But the particulars of the congestion pricing plan remain uncertain. Much remains to be decided, including the tax rates and the type and number of exemptions that may be granted. In the time since its passage, numerous groups have claimed the need for exemptions from the plan. Further erosion of the base from which funds would be collected could reduce this funding stream, undermining revenue raising capacity and the extent to which congestion is reduced.

Federal Fiscal Policy Concerns. While the likelihood of reductions in federal funding to the city has diminished with the election of a Democratic majority in the House, continued partisan rancor in Washington has increased the chances of fiscal turmoil that could further slow what is already expected to be a slow-growth U.S. economy. Of particular concern is the need to approve an increase in the debt ceiling. In February 2018 the President signed a law that temporarily eliminated the statutory limit on the debt ceiling for one year. The law expired on March 1, 2019, at which time the statutory debt ceiling came back into effect. The federal government cannot currently issue new bonds to borrow money and is only able to pay its obligations with existing cash reserves. According to the Congressional Budget Office, absent an increase in the debt ceiling, by September the government is expected to run out of cash to pay its bills.

Congress and the President will also need to address the fate of caps on defense and discretionary nondefense spending levels as well as next year's appropriation bills. Economic forecasters are anticipating that official statistics following Washington's recent failure to agree on spending will ultimately show that the government shutdown reduced GDP growth by about two-tenths of a percentage point in the first quarter of calendar year 2019 (the agency that measures GDP was one of those closed by the shutdown, which has delayed production of important national economic statistics). Another shutdown could further slow economic growth.

In Reserve

The Mayor and the City Council continue to place substantial funds into reserve that would be available to help balance the budget in the face of either a sharp drop in revenue or the need for unexpected spending. The financial plan includes $50 million in the general reserve for 2019—dollars budgeted as expenses but not attached to any specific budget function; at adoption of the 2019 budget this reserve stood at $1.45 billion, although (as is customary) it has been drawn down over the course of the year. If the remaining funds go unused, as they have in the Mayor's prior budget plans, they then become part of the surplus and would likely be used to prepay a portion of 2020 expenses. The financial plan also contains unallocated reserves of $1.25 billion in each year from 2020 through 2023.

In addition to these budgeted reserves, the de Blasio Administration and the City Council have put aside an estimated $4.5 billion in the Retiree Health Benefits Trust. While funds in the trust can only be used to pay all or part of the cost of retiree health benefits in a given year, it is a sizable sum: $2.5 billion in 2019 and $2.6 billion in 2020. Retiree health costs paid with funds from the trust free up an equal amount of city funds in the budget for other needs, although dipping into the trust fund to provide budget relief makes the city's challenge of funding its future health care obligations to retirees (which the City Comptroller currently estimates at $103.2 billion) even more difficult.

If IBO's economic forecast and our re-estimates of city revenues and expenditures prove generally correct, then the city's fiscal condition would remain stable over the financial plan period, with current-year budget surpluses and future-year gaps of a size that the city has routinely managed in past years. We estimate that the city will end 2019 with a total surplus of over $3.9 billion. This surplus could prepay 2020 expenses, creating a 2020 surplus of $1.1 billion. These funds, along with $727 million in additional resources IBO expects in 2021, could reduce the budget gap in that year to just over $1.7 billion (2.4 percent of estimated city-generated revenue). Additionally, our forecasts of revenue and expenditures over the remainder of the financial plan reduce the city's budget gap in 2022 to $1.7 billion (2.3 percent of estimated city-generated revenue) and $1.5 billion (2.0 percent of estimated city-generated revenue) in 2023. If the city is unable to close these gaps with additional revenues or savings, the $1.25 billion in reserves budgeted for each year of the financial plan are available to help bring the budget into balance. Finally, the city could draw on the Retiree Health Benefits Trust to help eliminate budget gaps.

A Chance of Rain?

As the current economic recovery continues to set records for longevity, concerns over the prospect of recession continue to grow. New York City managed to weather the Great Recession with less difficulty than most municipalities, mainly as a result of the resiliency of the local housing market, federal support of the financial sector (the city's largest single source of revenue), and continued strength in the health and education sectors of the economy. IBO's economic and tax forecast calls for continued moderate growth in the city's tax revenue at a pace well below the average in the years since the Great Recession. This growth enables the city to fund the spending increases that are part of this financial plan, spending increases which are in line with recent levels of spending growth and below expected growth in tax revenues. The budget gaps IBO forecasts for the out-years of the financial plan are manageable and comparable in percentage terms to previous gaps that the city has closed without much difficulty.

Acknowledging concerns about the potential for a recession in the not-too-distant future, the City Council has called for adding $250 million to the city's reserves. The Council has also expressed a number of programmatic priorities that were not addressed in the Mayor's Executive Budget. For example, the Council has called for wage equity for human services workers at an estimated cost of $215 million, a $200 million increase in Fair Student Funding, and a $10 million support system for youth in foster care. Additionally, the Council also has proposed a number of savings and revenue initiatives to pay for its spending measures.

It remains to be seen how the Mayor and Council will address this balancing act. Although more is better, IBO projects that in the event of an economic downturn, the city's current level of reserves is sufficient to buy time for decision-makers to find ways of bringing the budget into balance, typically through a combination of spending cuts, tax increases, and shifts in funding that transfer expenditures to other levels of government. Given the current structure of the city's reserve funds, it would be impracticable—and perhaps even unwise—to build up reserves to a level that could fully replace the tax revenues lost in even a moderate recession, particularly in the absence of a rainy day fund. There are practical limits on how much of a de-facto reserve can be accumulated if the only means of carrying it from one year to the next is by prepaying debt service and other future obligations. There are also limits to the funds that can be realized by drawing down the Retiree Health Benefit Trust in a given year, which prevent its use as a true rainy day fund. And without rules that specify when reserves can be drawn down, they are a tempting target for uses other than replacing tax revenues lost in a downturn.

Endnotes

[1]All employment growth is measured on a seasonally adjusted fourth quarter-to-fourth quarter basis.
[2]For more detail, see *Revised Histories and Extraordinary Trends in the New York City Economy* (IBO, May 2019).
[3]This is discussed in *Revised Histories and Extraordinary Trends in the New York City Economy* (IBO, May 2019).
[4]Prior to 2015, all corporations were either taxed under the General Corporation Tax (GCT) or Banking Corporation Tax (BCT). With state and local tax reform, C-corporations are now taxed under the combined Business Corporation Tax, while S-corporations are still taxed under the original GCT or BCT. The projections here refer to the total of all three corporate tax mechanisms.
[5]The dedicated amounts for fiscal years 2020 through 2023 are $127.5 million, $170.0 million, $171.7 million, and $173.4 million, respectively.